

Structure Research of Endogenous Ore-Fields and
Deposits

30-58-4-6/44

tasks of the structure research of endogenous deposits exist in reconstructing the history of the geological development of ore-containing fields and in the determination of the influence of tectonic perturbations and of the composition of rock upon the spatial distribution and form of the ore-fields in ore-containing territories, fields and deposits. The main research method exists in compiling detailed geological maps of ore-containing territories at a scale of 1:50000 - 1:100000, ore-fields 1:5000 - 1:10000, and single deposits 1:1000 - 1:2000 with great use of subterranean data (1:200 - 1:500) and detailed sketches (1:25 - 1:100). The author points out that at present ore-fields of great deposits do not have detailed geologic maps. The works on the field of modelling tectonic processes are at present still in an early stage. The researches want greater application of geologists, operating- and economics experts. In the next years all remainders in this fields should be worked up by considering geophysical research methods as far as possible. The research works in the

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field of the modelling of tectonic deformations should be organized in the geological institutes of the Academy of Sciences of the USSR as well as in the Academy of Sciences of the Union Republics. These researches systematically carried on, allow to rationalize the search-and prospecting works and to increase their effectiveness.

: 1. Geophysical prospecting—USSR

Card 4/4

VOL'FSO, F.I.; LUKIN, L.I., red.; SERGEYEVA, N.A., red. izd-va; BYKOVA,
V.V., tekhn. red.

[What are ore deposits, where and how should prospecting be
conducted] Chto takoe rudnye mestorozhdeniya, gde i kak ikh
iskat'. Izd.2. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po
geol. i okhrane nedr, 1959. 70 p.
(Ore deposits)

SCV/132-59-1-17/18

AUTHORS: Vol'fson, F.I., Shatalov, Ye.T., and Yerofeyev, B.N.

TITLE: On the All-Union Conference for the Elaboration of Scientific Bases of Prospecting for Concealed Mineral Deposits
(O vsesoyuznom soveshchanii po razrabotke nauchnykh csnov poiskov skrytogo orudieneniya)

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 1, pp 59-62 (USSR)

ABSTRACT: The above mentioned conference was called by the Academy of Sciences of the USSR and the Ministerstvo geologii i okhrany nedr SSSR (Ministry of Geology and Conservation of Mineral Resources), and took place from 18 to 24 November, 1958. Five hundred geologists, representing 25 geological managements, seven sovnarkhozes, 23 scientific-research institutes and five branches of the AS's of the USSR and allied republics, took part in the conference. Opening the conference, Academician A.G. Betekhtin stressed the important task expected of geologists in the next seven years. He also indicated the general trends of the development of the scientific base of prospecting for concealed deposits. P.Ya. Antropov, Minister of Geology

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SOV/132-59-1-17/18

On the All-Union Conference for the Elaboration of Scientific Bases of
Prospecting for Concealed Mineral Deposits

and Conservation of Mineral Resources of the USSR, also spoke on that subject. The conference heard 28 reports on the importance of different criteria and factors in the prospecting for concealed deposits by: O.D. Levitskiy, V.I. Smirnov, F.I. Vol'fson, L.I. Lukin, M.B. Borodayevskiy, N.I. Borodayevskiy, N.V. Petrovskaya, I.I. Ginzburg, V.I. Krasnikov, A.A. Saukov, Academician D.S. Korzhinskiy, P.F. Rodionov, A.P. Solovov, V.Z. Fursov, A.G. Tarkhov, Ye.A. Radkevich, K.F. Kuznetsov, V.S. Kormilitsin, B.P. Sanin, G.F. Yakovlev, A.V. Korolev, P.A. Shekhtman, V.N. Vydrin, G.D. Azhgirey, Ye.F. Burshteyn, V.A. Nevskiy, M.N. Godlevskiy, V.N. Yegorov, P.I. Kasatkin, T.N. Sirotkin, Ya. P. Baklayev, V.P. Loginov, G.F. Chervyakovskiy, I.V. Lepnykh, M.F. Novikov, F.L. Smirnov, P.S. Bernshteyn, A.I. Khazagarov, N.A. Ozerova, V.E. Pavarkova, I.L. Nikol'skiy, V.P. Fedorchuk, L.I. Shabynin, V.S. Koptev-Dvornikov, M.A. Sirin.

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SCV/132-59-1-17/16

On the All-Union Conference for the Elaboration of Scientific Bases of Prospecting for Concealed Mineral Deposits

Summing up the results of the conference, O.D. Levitskiy, Member-Correspondent of the AS of the USSR, said that the results achieved up to now are far from satisfactory. All concerned must work hard to elaborate new methods and means of prospecting for concealed mineral deposits.

ASSOCIATION: IGEM, Ministerstvo geologii i okhrany nedor SSSR (IGEM and USSR Ministry of Geology and Conservation of Mineral Resources)

Card 3/3

VOL'FSO, F.I.; LUKIN, L.I.; DYUKOV, A.I.; KUSHNAREV, I.P.; PEK, A.V.; RYBALOV, B.L.; SOHYUSHKIN, Ye.P.; KHOROSHILOV, L.V.; CHERNYSHEV, V.F.; BIRYUKOV, V.I.; GARMASH, A.A.; DRUZHININ, A.V.; KARAMYAN, K.A.; KUZNETSOV, K.F.; LOZOVSKIY, V.I.; MALINOVSKIY, Ye.P.; NEVSKIY, V.A.; PAVLOV, N.V.; RONENSON, B.M.; SAMONOV, I.Z.; SIDORENKO, A.V. [deceased]; SOPKO, P.F.; CHEGLOKOV, S.V.; YUDIN, B.A.; KREYTER, V.M., doktor geologo-mineral.nauk; retsenzent; .. KOTLYAR, V.N., doktor geologo-mineral.nauk, retsenzent; GRUSHEVOY, V.G.; doktor geologo-mineral.nauk, retsenzent; NAKOVNIK, N.I., doktor geologo-mineral.nauk, retsenzent; KUREK, N.N., doktor geologo-mineral.nauk, retsenzent; LIOPEN'KIY, S.N., retsenzent; SHATALOV, Ye.T., doktor geologo-mineral.nauk, red.; KRISTAL'NYY, B.V., red.; SERGEYEVA, N.A., red.izd-va; GUROVA, O.A., tekhn.red.

[Basic problems and methods of studying structures of ore provinces
(Continued on next card)]

1968

VOL'FSON, F.I.---(continued) Card 2.

and deposits] Osnovnye voprosy i metody izuchenija struktur
rudnykh polei i mestorozhdenii. Moskva, Gos. nauchno-tehn. izd-vo
lit-ry po geol. i okhrane nadr, 1960. 623 p.

(MIRA 13:11)

1. Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii. 2. Moskovskiy institut tsvetnykh metallov i zolota (for Dyukov, Biryukov, Druzhinin, Kuznetsov). 3. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov AN SSSR (for Garmash). 4. Akademiya nauk Armyanskoy SSR (for Karamyan). 5. Baleyzoloto (for Sidorenko). 6. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR (for Malinovskiy, Nevskiy, Pavlov, Chernyshev). 7. Moskovskiy geologorazvedechnyy institut im. S.Ordzhonikidze (for Ronenson). 8. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya (for Samonov). 9. Voronezhskiy universitet (for Sopko). 10. Kol'skiy filial AN SSSR (for Yudin).

(Ore deposits)

VOL'FSO_N, F.I.; LEZIN, S.I.

Basic structural characteristics of lead-zinc deposits in the
El'brus ore province. Geol. rud. mestorozh. no.1:55-69 Ja-F '60.
(MIRA 13:7)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, minera-
logii i geokhimii AN SSSR.
(Kuban Valley--Lead ores) (Kuban Valley--Zinc ores)

PEK, A.V., VOL'FSO^N, F. I., LUKIN, L. I.

Studying structures of endogenous ore deposits. Geol. rud. mesto-rozh. no.4:3-30 Jl-Ag '60. (MIRA 13:8)

I. Institut geologii rudnykh mestorozhdeniy, petrografii, i mineralogii geokhimii AN SSSR, Moskva.
(Ore deposits)

BAYMUKHAMEDOV, Kh.N.; VOL'FSON, F.I.; ZAKIROV, T.Z.; KOROLEV, V.A.;
KREYTER, V.M.; KUSHNAREV, I.P.; LUKIN, L.I.; NEVSKIY, V.A.;
NIKIFOROV, H.A.; PEK, A.K.; RUSANOVA, O.D.; SONYUSHKIN, Ye.P.;
CHEBNYSHEV, V.F.; SHEKHTMAN, P.A.

Aleksei Vasil'evich Korolev; obituary. Geol. rud. mestorozh.
no. 4:134-135 Jl-Ag '60. (MIRA 13:8)
(Korolev, Aleksei Vasil'evich, 1897-1960)

AL'TGAUZEN, M.N.; AMIRASLANOV, A.A.; VOL'FSO^N, F.I.; KREYTER, V.M.;
LEVITSKIY, O.D.; MALINOVSKIY, F.M.

Academician Iosif Fedorovich Grigor'ev; on the 70th anniversary
of his birth. Sov. geol. 3 no. 9:162-165 S '60.

(MIRA 13:11)

(Grigor'ev, Iosif Fedorovich, 1890-)

NASLEDOV, Boris Nikolayevich [deceased]; VOL'FSO^N, F.I., doktor geol.--
miner. nauk, red.; KOLOSHINA, T.V., red. izd-va; GUROVA, O.A.,
tekhn. red.

[Metallogeny of western Tien Shan and Uzbekistan] Metallogenija
Zapadnogo Tian'-Shania i Uzbekistana. Pod red. F.I. Vol'fsona.
Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane
nedr, 1961. 328 p. (Tien Shan—Ore deposits)
(Uzbekistan—Ore deposits) (MIRA 14:6)

VAKHROMEYEV, Sergey Andreyevich; ZAKHAROV, Ye.Ye., red.; VOL'FSON, F.I., red.
BEREZOVSKAYA, L.I., red. izd-va; MAKEYEV, V.I., red. izd-va; IVANOVA,
A.G., tekhn. red.

[Mineral resources, their classification and formation] Mestorozhdeniya
poleznykh iskopаемых, ikh klassifikatsiya i uslovia obrazovaniia. Pod
red. E.E.Zakharova i F.I.Vol'vsona. Moskva, Gos.nauchno-tekhn. izd-vo
lit-ry po gel. i okhrane nedr, 1961. 462 p. (MIRA 14:7)
(Mines and mineral resources)

SMIRNOV, Sergey Sergeyevich, akademik; BETEKHTIN, A.G., akademik, glav.
red.; VOL'FSO^N, F.I., doktor geol.-min. nauk, otv. red.;
GODOVIKOVA, L.A., red. izd-va; SHEVCHENKO, G.N., tekhn. red.

[Complex metal deposits and metallogeny of eastern Trans-
baikalia] Polimetallicheskie mestorozhdeniya i metallogeniiia
Vostochnogo Zabaikal'ia. Moskva, Izd-vo Akad. nauk SSSR, 1961.
(MIRA 15:1)
506 p.
(Transbaicalia—Ore deposits)

VOL'FSON, F.I.

Controversial questions on the genesis of sulfide deposits. Geol.
rud.mestorozh. no.5:118-128 S-O '61. (MIRA 14:9)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralogii i geokhimii AN SSSR, Moskva.
(Sulfides)

S/081/62/000/010/033/085
3168/E180

AUTHORS: Vol'fson, F. I., Kushnarev, I. P., Lukin, A. I.,
Smorchkov, I. Ye., Solyushkin, Ye. P., Tishkin, A. I.

TITLE: Some problems concerning the formation of hydrothermal
uranium deposits

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 117,
abstract 10G111 (Izv. vyssh. uchebn. zavedeniy. Geol. i
razvedka, no. 3, 1961, 12-24)

TEXT: A geological study of samples from hydrothermal uranium deposits
from various provinces shows that they have many genetic features in
common. The uranium-bearing provinces are characterized by many stages
of magmatism. Uranium mineralization is due to plutonic pockets of
granite magma in the final stage of development. Large-scale chemical
analyses for one of the provinces showed the mean uranium content of the

Early Hercynian magma complex to be $2.2 \cdot 10^{-4}\%$, that of the Middle
Hercynian $4.6 \cdot 10^{-4}\%$ and that of the Late Hercynian $6.3 \cdot 10^{-4}\%$. In each
separate intrusive complex the quantity of uranium is greater in the

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Some problems concerning the ...

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younger rocks. Uranium mineralization occurs during one of the final stages of the hydrothermal process. The principal paragenetic associations of pitchblende are pitch-sulfide, pitch-carbonate, pitch-fluorite and pitch-quartz-pyrites. The first two associations are typical of uranium deposits properly speaking. Uranium can be transported in hydrothermal solutions in tetravalent and hexavalent forms, passing through the stages of true and colloidal solutions. The optimum conditions for the formation of the upper part of uranium deposits are found at 500-700 m from the former surface of the earth with a possible vertical mineralization range of up to 1800 m. Deposition of the ores is accompanied by silicification, chloritization, albitization and sericitization of the enclosing rocks. Albitization is typical of the upper parts of uranium ore-bodies. The temperature at which the ores form is found to be 150-200°C. [Abstracter's note: Complete translation.]

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Card 2/2

ARKHANGEL'SKAYA, V.V.; VOL'FSON, F.I., doktor geol.-mineral.nauk,
otv. red.

[Geology of lead-zinc deposits in the Klichka ore region
(eastern Transbaikalia).] Geologiya svintsovo-tsinkovykh
mestorozhdenii Klichkinskogo rudnogo raiona (Vostochnoe
Zabaikal'e). Moskva, 1963. 213 p. Akademiiia nauk SSSR.
Institut geologii rudnykh mestorozhdenii, petrografi,
mineralogii i geokhimii. Trudy, no. 95)

VOL'FSO^N, F.I.; LUKIN, L.I.; ZALESSKIY, B.V.; ROZANOV, Yu.A.

Role of the study of the structures of ore deposits and of the
physicomechanical properties of rocks in the determination of conditions
of localization of endogenic ore deposits. Trudy IGEM no.41:5-14
'61. (MIRA 14:8)

1. Laboratoriya struktur rudnykh poley i mestorozhdeniy Instituta
geologii rudnykh mestorozhdeniy, petrografii, mineralogii i
geofiziki; Laboratoriya fiziko-mekhanicheskikh issledovaniy
gornykh porod Instituta geologii rudnykh mestorozhdeniy, petrografii,
mineralogii i geofiziki.
(Ore deposits)

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CIA-RDP86-00513R001860510004-6

VOL'FSO, F.I.; FAVORSKAYA, M.A.

In memory of Academician Sergei Sergeevich Smirnov. Izv.
AN SSSR. Ser. geol. 30 no. 10:3-14 0 '65. (MIRA 18:12)

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860510004-6"

V. V. Fomin, Faculty, Moscow, USSR.

Current position of the investigation of hydrocarbon mineralization
in different structural stages. I. v. AM Geol. Ser. 4, N. 10:
78-38 C 165 (1978) 18-13

I. Institut geologii rudnykh massivov SSSR, petrografiya, mineralogiya
i geoхimii, AM SSSR, Moscow. Submitted May 23, 1975.

SHCHERBAKOV, D.I., akademik; CHUKHROV, F.V.; VOL'FSO^N, F.I., doktor geol.-min.
nauk; LUKIN, L.I.

Scientific work of Academician Iosif Fedorovich Grigor'ev.
Izv. AN SSSR. Ser.geol. 30 no.11:110-114 N '65. (MIRA 18:12)
1. Chlen-korrespondent AN SSSR (for Chukhrov).

VOL'FSO_N, F.I.; LUKIN, L.I.

Prospecting for hidden endogenetic mineralization. Razved. i
okh. nedr 31 no.7:1-6 Jl '65. (MIRA 18:11)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralogii i geokhimii AN SSSR.

VLASOV, K.A.; BELOV, N.V.; VOL'FSON, F.I.; GENKIN, A.D.; GINZBURG, A.I.;
LUKIN, L.I.; KORZHINSKIY, D.S.; SALTYKOVA, V.S.; SAUKOV, A.A.;
SOKOLOV, G.A.; SHCHERBAKOV, D.I.; SHADLIUN, T.N.

Konstantin Avtonomovich Nenadkevich, 1830-1963; obituary. Geol.
rud. mestorozh. 6 no.1:123-125 Ja-F '64.
(MIRA 17:11)

BRIZGALOV, N.A.; VOL'FSON, V.I.

The second edition of the book 'Formation conditions of metalliferous and nometalliferous deposits by P.M.Tatarinov. Reviewed by N.A.Brizgalov, and V.I.Vol'fson. Zap.Vses.min.ch-va. 94 no.2:240-247 '66. (MIka 28:5)

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L 50190-65 EPA(a)-2 /EWT(m)/EFF(n)-2/T/EWP(t)/EWP(b)/EWA(c) Fu-4
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Bf1

Batulin, S. G.; Golovin, YE. A.; Zelenova, O. I.; Kashirtseva, M. P.
Komarova, G. V.; Kondrat'yeva, I. A.; Lisitsin, A. I.; Perel'man,
A. I.; Sinden'nikova, V. D.; Chernikov, A. A.; Shmariovich, YE. M.

Exogenous epigenetic deposits of uranium; formation conditions
(Ekzonennyye epigeneticheskiye mestorozhdeniya urana; usloviya
obrazovaniya). Moscow, Atomizdat, 1965. 321 p. illus., biblio.
Errata slip inserted. 1100 copies printed.

TOPIC TAGS: deposit formation, epigenetic theory, exodiagenetic
deposit, surface uranium accumulation, uranium bituminous deposit,
uranium deposit, uranium, nuclear fuel. 19

PURPOSE AND COVERAGE: This book is intended for readers specializing
in the geology of ore deposits, in particular for those concerned
with atomic raw materials, and also for students of higher-educa-
tion institutions. In the book, for the first time in Soviet and
foreign literatures, the epigenetic theory of uranium-deposit
formation is expounded. Many Soviet and foreign source materials

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have been used in this book, and some of the investigations carried out by the present authors are published in this book for the first time. Several names of Soviet scientists working in this field are mentioned. V. A. Uspenskiy collaborated on Ch. X, and M. A. Yiselkina on Ch. III. The authors thank A. A. Saukov, deceased, Corresponding Member Academy of Sciences USSR, and F. I. Vol'fson, D. G. Sapozhnikov, V. I. Gerasimovskiy, M. F. Sverdlov, G. S. Gritsaychenko, and I. P. Kushnarev, Doctors of Geologicco-Mineralogic Sciences; V. I. Danchev, Candidate of Geologicco-Mineralogic Sciences, and N. A. Volokovskykh. There are about 12 pages of references of which about 3/4 are Soviet.

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Ch. XI. On surface uranium accumulations in regions with arid
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VINOGRADOV, A.P.; KORZHINSKIY, D.S.; SMIRNOV, V.I.; SHCHERBAKOV, D.I.;
AYDIN'YAN, N.Kh.; VINOGRADOV, V.I.; VOL'FSOON, F.I.; GENKIN, A.D.;
DANCHEV, V.I., LUKIN, L.I.; OZERCOVA, N.A.; PEREL'MAN, A.I.; REKHARSKIY,
V.I.; SMORGCHKOV, T.Ye.; FEODOT'YEV, K.M.; SHADLUN, T.N.; SHIFULIN, P.K.

Aleksandr Aleksandrovich Saukov, 1902-1964; obituary. Geol. rud. mestorozh.
(MIRA 18:4)
7 no.1:124-125 Ja-F '65.

VOL'FSO^N, F.I., doktor geol.-miner. nauk, prof., otd. red.

[Geology of lead-zinc deposits in the Kansay ore zone]
Geologiya svintsovo-tsinkovykh mestorozhdenii Kansaiskogo
rudnogo polia. Moskva, Nauka, 1965. 200 p.
(MIRA 18:6)

l. Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii.

KOROLEV, Aleksey Vasil'yevich; SHEKHTMAN, Pavel Aleksandrovich;
VOL'FSON, F.I., retsenzient; YERMAKOV, N.P., red.;
SMIRNOVA, Z.A., ved. red.

[Structural conditions governing the distribution of
postmagmatic ores] Strukturnye usloviia razmeshcheniya
poslemagmaticheskikh rud. Moskva, Nedra, 1965. 506 p.
(MIRA 18:4)

VOL'FSON, F.I.; GENKIN, A.D.

Conference on the problem of postmagmatic ore formation held in
Prague. Geol. rud. mestorozh. 6 no.1:113-122 Ja-F '64.
(MIRA 17:11)

ORLOVA, A.V.; TOMSON, I.N.; VOL'FSON, F.I.; LUKIN, L.I.;
SHATALOV, Ye.T., red.

[Lithological and structural factors in the distribution
of mineralization in ore regions; basic principles of
metallagenetic research and the compilation of metalloc-
genetic and forecasting maps of ore regions] Litologiche-
skie i strukturnye faktory razmeshcheniya orudieneniia v
rudnykh raionakh; osnovnye printsipy metallogenicheskikh
issledovanii i sostavleniya metallogenicheskikh i prognoz-
nykh kart rudnykh raionov. Moskva, Nedra, 1964. 212 p.
(MIRA 17:12)

VOL'FSON, F.I.

Geologic structures of lead-zinc deposits in the Argun ore
belt. Trudy IGEM no.83:541-550 '63. (MIRA 16:11)

VOL'FSON, F.I.; LUKIN, L.I.; SOKOLOV, G.A.

In memory of Academician Sergei Sergeevich Smirnov. Geol. Muz.
mestorozh. no.6:114-116 N-D '62. (MIRA 15:12)
(Smirnov, Sergei Sergeevich, 1895-1947)

VOL'FSON, F.I.; GINZBURG, I.I.; SAPOZHNIKOV, D.G.; SOKOLOV, G.A.;
YANITSKIY, A.L.

Eightieth birthday of B.P. Krotov. Geol.rud.mestorozh. no.5:117-
118 S-0 '62. (MIRA 15:12)
(Krotov, Boris Petrovich, 1882-)

VOL'FSON, F. I. (reader) and DRUZHININ, A. V.

"Patterns of Distribution of Ore Fields in Different Structural-Facies
Zones of East Zabaykal'ye"

report presented at the First All-Union Conference on the Geology and
Metallurgy of the Pacific Ocean Ore Belt, Vladivostok, 2 October 1960

So: Geologiya Rudnykh Mestorozhdeniy, No. 1, 1961, pages 119-127

VOL'FSO^N, F.I.; LUKIN, L.I.; NEVSKIY, V.A.; PEK, A.V.; SHEKHTMAN, P.A.

"Prospecting for mineral deposits" by V.M. Kreiter, Reviewed
by F.I. Vol'fson and others. Sov.geol. 4 no.12:133-137 D '61.
(MIRA 15:2)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralogii i geokhimii.

(Prospecting)
(Kreiter, V.M.)

SMIRNOV, Sergey Sergeyevich, akademik; BETEKHTIN, A.G., akademik,
glav. red.; VOL'FSO^N, F.I., doktor geol.-min. nauk, otv.
red.; GODOVIKOVA, L.A., red. izd-va; DOROKHINA, I.N.;
tekhn. red.

[Ore deposits and metallogeny of eastern regions of the U.S.S.R.]
Rudnye mestorozhdeniya i metallogeniya vostochnykh raionov SSSR.
Moskva, Izd-vo Akad. nauk SSSR, 1962, 357 p. (MIRA 15:9)
(Siberia, Eastern Ore deposits)

VOL'FSON, Fedor Iosifovich; LUKIN, Leonid Ivanovich; SERGEYEVA, N.A.,
red. izd-va; BYKOVA, V.V., tekhn. red.

[What are ore deposits, where and how to search for them] Chto
takoe rudnye mestorozhdeniya, gde i kak ikh iskat'. Izd.3.,
perer. Moskva, Gosgeoltekhnizdat, 1962. 77 p. (MIRA 15:12)
(Ore deposits) (Prospecting)

PAGE 1 BOOK INFORMATION

SER/567

UFER. Ministerstvo svyazi. Naučno-issledovatel'skij upravlyayush'jij
Novye apparatura, elektronika i elektronika; informatsionnyj oborot.
(New Electro-Communication and Power Supply Equipment; Collection of
Information) Moscow, Svyazistdat, 1959. 100 p. (Series: "Tekhnika svyazi")
15,500 copies printed.

Rep. M.I. V.A. Lipkin; Eds.: Yu.S. Kostinov and N.M. Mandrikina;

Fech. Ed.: B.P. Karzhilova.

Purpose: This collection of articles is intended for technical personnel of
the Ministry of Communications USSR and its subordinate telecommunication
establishments.

CONTENTS: The articles in this collection describe various new pieces of Soviet
equipment used in electrical communications systems. These include:
broadcast studio equipment, mobile audio amplifiers, transmitters, cable
receivers, converters, rectifiers, and switchboards. No personalities are
mentioned. References accompany the articles in footnotes.

Meter, Ch.M., and B.N. Parfenov. A.G./Ch. "Walking Cloud" Unit
[This article provides telephone line service. The author describes the
principles of operation, and the block diagram of the unit.] 24

Meter, Ch. M. 12 - 200 Line Transformer with Lightning Arrestor.
This power transformer is designed for operation with overfield
transmission lines or wire broadcasting systems. The author describes
the diagram and design of the transformer.

Vil'yev, V.M. Subscriber Telegraph Station of the ALM-20 Capacity
[This station is designed for installation in oblast or rayon
communication centers of the subscribers' automatic telegraph systems.
The diagram shows the subscriber facilities and 3 voice-frequency
channels.] 34

Brukh, V.G. VES Lead-In Cable Cabinet Racks
[The author lists a variety of racks for connecting balanced cables
of varying capacity. A table indicates the types of mounting places
for each rack. The author also describes circuit diagrams and opera-
tion of the rack assemblies.] 45

Filippov, V.M. VS-50 Lead-In Rack
[The author briefly describes the structure and operation of this rack,
which serves for connection of communication cables
and over-head lines, and for protection of static equipment.] 46

Zlobkov, M.V., G.A. Volkov, and V.B. Shchuchnikov. Constant Voltage
Direct Current Converters with Transistor Triodes
These converters provide power for communication equipment
by means of a single battery. The article also describes converter
operating principles, advantages and disadvantages, field of applica-
tion and components. The results of experiments with 3 types of con-
verters are shown in a table.

Gol'dberg, L.S. VES-36/50 Rectifier Assembly
[The rectifier serves as a power supply for equipment used in intra-
rayon and intra-oblast telecommunications and in dial telephone
systems. The author gives the circuit diagrams and design of the assembly.] 49

Kompanitcova, L.S. EMO-1 Combined Switchboard
[The switchboard connects local subscribers and themselves and connects
long distance lines with local telephone network subscribers and with
those of the automatic telephone system. The article describes connection
diagrams of various combinations of connections, structural details of
the components and the assemblies as the whole.] 56

Yagolotov, M.M. ENS-4 Drilling Rig
[The rig drills the holes for overfield line poles. The author describes
the functional diagrams, design, and operation of the assembly.] 96

AVAILABLE: Library of Congress.

GK/ln (exp)

VOL'FSON, G.A.; BRUD, V.G., starshiy inzhener otdela.

Tester lead-in and lead-in posts for regional telecommunication
offices. Vest.sviazi 16 no.1:6-9 Ja '56. (MLRA 9:5)

1. Nachal'nik otdela TSentral'nogo konstruktorskogo byuro (for
Vol'fson).
(Telegraph lines)

VOL'FSO^N, G. G.

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
Foods

Vitaminization of milk and milk products with ascorbic acid. S. M. Bessonov and G. I. Vol'fson (Food Inst., Acad. Med. Sci. U.S.S.R., Moscow). Voprosy Pitanija 12, No. 5, 59-60 (1953). Enrichment of milk and milk food products for children with up to 10 mg. % ascorbic acid does not affect taste quality nor hasten curdling of the casein on heating. Storage of the enriched milk at 4-6° for 20 hrs. does not cause an appreciable loss of the vitamin. Enrichment of milk soups with up to 15 mg. % ascorbic acid does not spoil the taste qualities. Storage of hot enriched soups leads to loss of the vitamin; after 1 hr. at 65-75° the loss is 10-34%, after 2 hrs. 12-44%. The stability of the vitamin seems to increase with an increase of concn. in milk soup; this is especially pronounced at the 15 mg. % level. (3) 8

SPIVAK, M.Ya.; ARGUDAYEVA, N.A.; NABIYEV, E.G.; CHISTOVICH, G.N.; RIVLIN, M.I.; SEMENOV, M.Ya.; KRUGLIKOV, V.M.; SHAL'NEVA, A.M.; TITROVA, A.I.; RAYKIS, B.N.; MILYAYEVA, Ye.N.; BRUDNAYA, E.I.; GODINA, I.F.; VOL'FSOHN, G.I.; SOSONKO, S.M.; KOLESINSKAYA, L.A.; VYSOTSKIY, B.V.; MALYKH, F.S.; MIROTVORTSEV, Yu.I.; SYCHEVSKIY, P.T.; GOPACHENKO, I.M.; KARPITSKAYA, V.M.; FETISOVA, I.A.; MARTYNYUK, Yu.V.; EMDINA, I.A.

Annotations. Zhur. mikrobiol., epid. i immun. 40 no.3:128-131
(MIRA 17:2)
Mr '63.

1. Iz Kemerovskogo meditsinskogo instituta i Kemerovskoy klinicheskoy bol'nitsy No.3 (for Spivak, Argudayeva). 2. Iz Kazanskogo instituta usovershenstvovaniya vrachey imeni Lenina (for Nabiyev). 3. Iz Leningradskogo kozhnogo dispansera No. 1 (for Chistovich, Rivlin). 4. Iz Rostovskoy oblastnoy sanitarno-epidemiologicheskoy stantsii (for Semenov). 5. Iz Stavropol'skogo instituta vaktsin i syvorotok (for Kruglikov, Shal'neva, Titrova, Raykis). 6. Iz Kuybyshevskogo instituta epidemiologii, mikrobiologii i gigiyeny i TSentral'nego instituta usovershenstvovaniya vrachey (for Milyayeva). 7. Iz Vsesoyuznogo nauchno-issledovatel'skogo instituta zhelezno-dorozhnay gigiyeny Glavnogo sanitarnogo upravleniya Minis-terstva putey soobshcheniya i Detskoj polikliniki st. Lyublino

(Continued on next card)

SPIVAK, M.Ya.----- (continued) Card 2.

Moskovskoy zheleznoy dorogi (for Brudnaya, Godina). 8. Iz Vrachebno-sanitarnoy sluzhby Severnoy zheleznoy dorogi (for Vol'fson, Sosonko, Kolesinskaya). 9. Iz Vladivostokskogo instituta epidemiologii, mikrobiologii i gigiyeny i Primorskoy krayevoy protivochumnoy stantsii (for Vysotskiy, Malykh, Mirotvortsev, Sychevskiy, Gopachenko). 10. Iz Yaroslavskogo meditsinskogo instituta (for Karpitskaya). 11. Iz Aralmorskoy protivochumnoy stantsii (for Fetisova). 12. Iz L'vovskogo instituta epidemiologii, mikrobiologii i gigiyeny (for Martynyuk, Emdina).

VOL'FSON, G.I.

Roman Sergeevich Chetyrkin. Gig.i san. no.5:39-42 My '54. (MLRA 7:5)

1. Iz Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.
(Chetyrkin, Roman Sergeevich, 1797-1865)

BELYAYEV, A.I.; FIRSANOV, L.A.; VOL'FSON, G.Ye.; LAZAREV, G.I.

Effect of cathodic current density and the cryolite relation
of electrolytes on the current efficiency in aluminum production.
Izv. vys. ucheb. zav.; tsvet. met. 4 no.5:117-122 '61. (MIRA 14:10)

1. Krasnoyarskiy institut tsvetnykh metallov i Volkhovskiy
alyuminiyevyy zavod.

(Aluminum—Electrometallurgy)

ACCESSION NR: AT4001237

S/3031/63/000/035/0101/0107

AUTHORS: Belyayev, A. I.; Firsanova, L. A.; Vol'fson, G. Ye.; Lazarev, G. I.; Pal'chikov, A. I.

TITLE: Obtaining ultrapure aluminum by distillation through subfluoride in a pilot unit

SOURCE: Gosudarstvennyy institut tsvetnykh metallov. Sbornik nauchnykh trudov. Moscow, no. 35, 1963, 101-107

TOPIC TAGS: ultrapure aluminum, ultrapure aluminum production, ultrahigh purity metal, ultrahigh purity metal production, ultrahigh purity aluminum, ultrahigh purity aluminum production

ABSTRACT: Apparatus for the production of ultrapure aluminum by distillation via the hypofluoride, developed at the Institut tsvetnykh metallov im. M. I. Kalinina (Institute of Nonferrous Metals) by A. I. Belyayev and L. A. Firsanova (Trudy Mintsvetmetzoloto im. M. I. Kalinina, no. 33, 1960) is described briefly. In this method the purified aluminum is brought in contact with vapor-

Card

1/12

ACCESSION NR: AT4001237

ized aluminum fluoride at 1050° and residual pressure 10^{-1} -- 10^{-2} mm Hg. The produced aluminum hypofluoride is decomposed into pure aluminum and aluminum fluoride which is returned to the cycle.

During the course of the trials of the aluminum distillation technology, conditions were found under which large aluminum ingots of specified shape can be produced in the condenser, with simultaneous production of the return condensate ($\text{Al} + \text{AlF}_3$ with small amount of disperse aluminum). Tests with the pilot plant have shown the possibility of producing by this method superpure aluminum (99.999%) in amounts up to 1 kg a day. The aluminum obtained in the pilot plant was found suitable for production of semiconductor rectifiers, since the siluminium produced from it has less than 0.0001% Fe, 0.0006% Mg, and 0.0001% Cu. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Gosudarstvenny*y institut tsvetny*kh metallov (State Institute of Nonferrous Metals)

Card 2/2

18.3100A

also 1087

22799

S/136/61/000/005/002/008

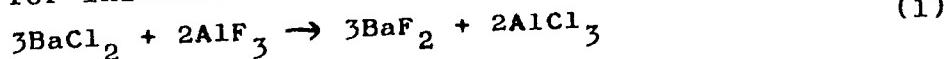
E073/E535

AUTHORS: Belyayev, A.I., Firsanova, L. A., Vol'fson, G.Ye.
and Katon, Ya. Sh.

TITLE: On the Problem of Interaction of Barium Chloride with
Cryolite Melts and its Influence on the Technology of
Electrolytic Refining of Aluminium

PERIODICAL: Tsvetnyye metally, 1961, No.5, pp.43-45

TEXT: In electrolytic refining of aluminium by means of the
three-layer method, an electrolyte is used consisting of barium
chloride, cryolite, aluminium fluoride and sodium chloride.
Chemical analyses of electrolytes reveal the presence in the
electrolytes of barium fluoride in quantities reaching 17 to 18%.
This indicates interaction in such melts of barium chloride with
the fluorides, for instance in accordance with the reaction:



The results are given of analyses of the electrolytes from baths
for electrolytic refining of Al with various cryolite ratios,
Table 1. (K.o. - cryolite ratio; composition of the electrolyte,

Card 1/4

On the Problem of Interaction ...

²²⁷⁹⁹
S/136/61/000/005/002/008
E073/E535

wt.%). It can be seen that with decreasing cryolite ratios, from 1.94 to 1.33 (i.e. with increasing AlF_3 content), the content of BaF_2 increases from 1.89% to 17.31%. According to the reaction, Eq.(1), in addition to BaF_2 , volatile AlCl_3 forms, which leads to a partial loss of Cl. For the purpose of verifying the possibility of the reaction expressed by Eq.(1), synthetic mixtures of salts were produced with cryolite ratios between 1 and 3 containing 3 to 60 wt.% BaCl_2 . This mixture was maintained in the molten state for 1 hour at 1000°C and then rapidly cooled and analysed chemically for the contents of Na, Al, Ba and Cl. From the analytically determined Ba and Cl contents, the respective content of BaCl_2 was calculated and these values were compared. A plot is made of the analytically determined BaCl_2 content (%), based on the % of Cl₂ in the melt) as a function of the BaCl_2 content in the charge for cryolite ratios (K.o.) of 2.8 to 1.0 (the uppermost line applies to the initial BaCl_2 content in the charge). The results show that the reaction expressed by Eq.(1) does indeed take place and leads to an accumulation of BaF_2 in the electrolyte. This is brought about by an increase in the AlF_3 content.

Card 2/4

22799

On the Problem of Interaction ... S/136/61/000/005/002/008
E073/E535

of the melt, i.e. by a decrease in the cryolite ratio. The following conclusions are arrived at:

1. Considerable interaction was observed in melts with cryolite ratios below 2, whereby as a result of this interaction BaF_2 forms which has an unfavourable influence on the properties of the melt.
2. To improve the operation of industrial baths in electrolytic refining of Al, the cryolite ratio must not drop below 1.7.
3. It is necessary to develop a rapid method of analysis of the electrolyte which is applicable to electrolytic refining of Al for the purpose of systematic checking of the composition and maintaining an optimum cryolite ratio. There are 1 figure and 2 tables.

ASSOCIATIONS: Institut tsvetnykh metallov imeni M. I. Kalinina
(Institute of Nonferrous Metals imeni M.I.Kalinin) (Belyayev and Firsanova).
Volkhovskiy alyuminiyevyy zavod (Volkhov Aluminium Works) (Vol'fson and Katon)

Card 3/4

BELYAYEV, Anatoliy Ivanovich; FIRSANOV, Lidiya Alekseyevna; NEKRASOV, B.V., retsenzent; VOL'FSON, G.Ye., inzh., retsenzent; EL'KIND, L.M., red.izd-va; KARASEV, A.I., tekhn.red.

[Monovalent aluminum in metallurgical processes] Odnovalentnyi aliuminii v metallurgicheskikh protsessakh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959.
141 p.
(MIRA 12:10)

1. Chlen-korrespondent AN SSSR (for Nekrasov).
(Aluminum--Electrometallurgy) (Chemistry, Metallurgic)

114525-65 ENG(j)/EWP(e)/EAT(a)/EPF(c)/EPR/EWP(t)/EWP(b) Pt-4/Ps-4 JB/
ACCESSION NR: AP4011287 NW/NH S/0136/64/000/001/0047/0054

AUTHOR: Vigdorovich, V. N.; Krapukhin, V. V.; Chernomordin, I. F.; Vol'fson,
G. Ye.; Lazarev, G. I.; Pal'chikov, A. L.

TITLE: Conditions for obtaining high-purity aluminum by zone refining 14

SOURCE: Tsvetnye metally*, no. 1, 1964, 47-54 ~7 15

TOPIC TAGS: aluminum, aluminum refining, zone refining, high purity aluminum,
aluminum zone refining

ABSTRACT: Experiments were conducted on four grades of aluminum: AB3000 (0.003%
Fe; 0.002% Si; 0.005% Cu -- total impurities < 0.01%); AB0000 (0.0015% Fe;
0.001% Si; 0.001% Cu -- total impurities < 0.004%); intermediate-purity aluminum
(0.0016-0.0022% Fe; 0.0013-0.0014% Si; 0.0006-0.0008% Cu); and aluminum purified
by the subfluoride distillation method. Impurity content was determined by
spectral analysis, and overall estimation of purity by measurement of the residual
electrical resistance of the aluminum at the temperature of liquid helium. It was
found that high-purity aluminum can be obtained by zone refining, and that resis-
tance heating is better than induction heating when working with graphite boats 15

Card: 1/2

L 10525-65

ACCESSION NR: AP4011287

and in vacuum. Vacuum degassing of the aluminum lowers the Mg content while reducing the effectiveness of zone refining. Aluminum with a lower content of impurities from the transition metals of the IVa, Va, and VIa groups was obtained by remelting the "dirty" ends of the test samples, with additional zone refining. Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 008

OTHER: 004

Card: 2/2

VOL'FSO^N, I. B.

AID P - 2412

Subject : USSR/Electricity

Card 1/1 Pub. 26 - 11/33

Authors : Rytslin, A. M., Donbass Power System
Blagonadezhdin, V. M., Kuybyshev Power System
Knyazevskiy, B. A., Moscow Power System
Vol'fson, I. B., Kirov Power System
Musatov, T. P., Donbass Power System
Ioffe, Ye. F., Gor'kiy Power System

Title : Discussions on the volume of instructions and operational documentation for power substations

Periodical : Elek sta 5, 37-43, My 1955

Abstract : The article refers to an article by Eng. G. B. Yakusha published in this periodical (No. 10, 1953) and gives a summarized account of opinions and answers received from readers. The subject of the discussion is the documentation involved in the operation of substations. The need for standard instructions and a decrease in the amount of paper work is stressed by all correspondents.

Institution: None

Submitted : No date

VOL'FSON, I.M., inzh.

Experimental investigation of profile cascades of turbine blading.
[Trudy] IMZ no.6:65-90 '60. (MIRA 13:12)
(Turbines--Aerodynamics)

26.2/22

S/124/61/000/008/014/042
A001/A1C1

AUTHOR: Vol'fson, I.M.

TITLE: An approximate estimate of the effect of countersinking of blade outlet edges on the end losses of energy in straight cascades of the profiles

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 8, 1961, 32, abstract 8B194 (V sb. "Issled. elementov parvykh i gaz, turbin i osevykh kompresorov. (Tr. Leningr. metallich. z-da, v. 6)", Moscow-Leningrad, Mashgiz, 1960, 101 - 106)

TEXT: The author takes into account approximate additional energy losses connected with the existence of a closed axial gap in annular turbine cascades. The theoretical estimate of these losses is performed for a straight cascade around which flows a potential stream of incompressible fluid with formation of a turbulent boundary layer. The loss coefficient is determined as the ratio of friction force power on the walls of the interblade channel to the power corresponding to kinetic energy of the potential stream flowing through the inter-

Card 1/2

JB

B

An approximate estimate ...

S/12⁴/61/000/008/014/042
A001/A101

blade channel at the absence of friction forces. Results of comparison with experiments are presented.

L. Naumova

[Abstracter's note: Complete translation]

Card 2/2

S/123/61/000/010/013/016
A004/A104

AUTHORS: Vol'fson, I. M.; Nausov, M. K., and Ushakov, V. I.

TITLE: Remote-controlled coordinator for the static blowing through of the blade profiles

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 10, 1961, 17, abstract 10I134 (V sb.: Issled. elementov parovykh i gaz. turbin i osevykh kompressorov. [Tr. Leningr. metallich. z-da, 6]. Moscow-Leningrad, Mashgiz, 1960, 464-470)

TEXT: The authors describe the coordinator, its mechanical part, the control panel and electric circuit. Service tests showed the necessary control accuracy of the displacements of the devices during the tests (linear displacements ± 0.1 mm, rotary movements $\pm 0.1^\circ$). The system makes it possible to improve the working conditions of the laboratory staff and increase the quality of tests. There are 4 figures.

[Abstractor's note: Complete translation]

Card 1/1

VOL'FSON, I. M.

Lengthening the service life of ties. Put' i put. khoz. 7
no. 3:20-23 '63. (MIRA 16:4)

1. Nachal'nik otdela mekhanizatsii sluzhby puti, Leningrad.

(Railroads--Ties)

VOL'FSO, I.M.; YELIZAROV, V.S.; LOPATITSKIY, A.O.; OZERNOV, L.A.;
TRIFONOVA, M.A.

Aerodynamic study of the operation of plane and annular cascades
with TS-2A profiles developed by the Moscow Institute of Power
Engineering. Trudy MEI no.47:31-36 '63. (MIRA 17:1)

VOL'FSO_N, I.S.; POLYAKOVA, A.I.; AL'FIDOVSKAYA, V.G.; FAKHRIUTDINOVA, L.F.

Present status of the production of hydrocarbon stock in the
gasoline plants of the middle Volga Valley Council of National
Economy. Gaz. devo no. 5228-33 '64 (MIRA ENE)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut.

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860510004-6

BERG, G.A.; MASAGUTOV, R.M.; VOL'FSOV, I.S.; KIRILLOV, T.S.; CHEKOVINSKIY,
M.I.; KHARITSKAYA, R.Z.

Hydropurification of thermal cracking reflux. Trudy Bash NIINP no.5:
69-77 '62.
(MIRA 17:10)

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860510004-6"

VOL'FSION, I.S.; ARAMYAN, Ye.S.; YUDINTSEVA, I.P.; KHASANOVA, N.A.

Effect of the fractional composition on the rate of the
extraction of aromatic hydrocarbons. Nefteper. i neftekhim.
no. 3:29-30 '64. (MIRA 17:5)

1. Tatarskiy nauchno-issledovatel'skiy institut g. Kazan'.

L 10187-66 EWT(m)/T WE

ACC NR: AP5028472

SOURCE CODE: UR/0286/65/000/020/0046/0046

AUTHOR: Vol'fson, I. S.

29
B

ORG: none

TITLE: Method for stabilization of desalinated petroleum. Class 23, No. 175592

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 46

TOPIC TAGS: petroleum, petroleum industry, gasoline, distillation

ABSTRACT: This Author Certificate presents a method for stabilization of desalinated petroleum by preliminary heating in a heat-exchanger and a tubular furnace and passage through a stabilizing column. A vapor spray is created in the stabilizing column by returning part of the petroleum product (after it has been heated in the furnace) to the bottom of the column. To prevent the decomposition of sulfur compounds in the petroleum and to simplify the process, superheated gasoline vapors, tapped off at the 6th, 8th, and 10th tray of the stabilizing column, are used as the returning petroleum product.

SUB CODE: 11/ SUBM DATE: 20Feb64

/3

Card 1/1

UDC: 665.54

VOL'FSQN, I.S.; ARAMYAN, Ye.S.; DUBOV, A.V.

Obtaining sulfolene. Nefteper. i neftekhim. no. 4:39-77 164.
(MIFA 17:5)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut,
g. Bugul'ma.

VOL'FSON, I.S.; ARAMYAN, Ye.S.; YUDINTSEVA, I.P.; KHASANOVA, N.A.

Extraction of aromatic hydrocarbons with sulfolane. Khim.¹
tekh.topl.i masel 8 no.2:6-9 F '63. (MIRA 16:10)

KOZIK, B.L.; VOL'FSO^N, I.S.; VOL'F, M.B.; GERMASH, L.I.

Preparation of cymene by the alkylation of toluene. Khim. i tekhn.
topl. i masel. 6 no.10:9-12 0 '61. (MIRA 14:11)

1. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke
nefti.

(Cymene)

(Toluene)

(Alkylation)

VOL'FSON, I.S.; TELESHOVA, M.N. Prinimali uchastiye: SHEYKH-ALI, G.A.;
KAMALOVA, R.K.; SHERGINA, E.G.; SHASHINA, A.D.

New oil field in the Tatar A.S.S.R. Khim. i tekhn. topl. i
masel 9 no. 5:29-31 5 My'64 (MIRA 17:7)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut.

L 21104-65 ENT(?) /EPF(c) /T Pr-4 WE/RM

ACCESSION NR: AP4049882 S/0318/64/000/003/0029/0030

AUTHOR: Vol'fsen, I. S., Aramyan, Ye.S., Yudintseva, I.P., Khasanova, N. A.

TITLE: Effect of fractional composition on the extent of recovery of aromatic hydrocarbons

SOURCE: Neftepererabotka i neftekhimiya, no. 3, 1964, 29-30

TOPIC TAGS: petroleum refining, aromatic hydrocarbon, gasoline fraction, countercurrent extraction

ABSTRACT: Straight-run gasoline fractions boiling at 62-85, 62-120, 62-150, 85-120, and 120-150°C were used in the study. After dearomatizing with oleum until the aromatic compounds were completely eliminated, pure aromatic hydrocarbons were added (benzene, toluene, xylene) so that their total concentration was 30 wt. % of the stock. The content of aromatic hydrocarbons in the stock, raffinate and extract was determined by the dispersion method. A flow diagram of the laboratory assembly with a disk-rotor contactor for counter-current liquid extraction is given. It was found that: (1) as the ratio of solvent to stock increased, the recovery of aromatic hydrocarbons also increased, and (2) for the same ratio of solvent to stock in the extraction of benzene and toluene from

Card 1/2

L 21104-65

ACCESSION NR: AP4049882

narrow fractions (62-85C, 85-120C), the recovery of the total as well as individual aromatic hydrocarbons was less than in the case of their extraction from a mixture of the wider 62-120C fraction. Under optimum conditions for benzene and toluene, the absolute recovery of xylene was low; hence it is desirable to remove the benzene-toluene fraction (62-120C) first, and then to proceed with the recovery of the xylene fraction under conditions which are optimum for it. Orig. has: 1 figure and 1 table.

ASSOCIATION: Tatarskiy nauchno-issledovatel'skiy institut g. Kazan' (Tatar Scientific Research Institute, Kazan)

SUBMITTED: 00

ENCL: 00

SUB CODE: FP, OC

NO REF SOV: 000

OTHER: 000

Card 2/2

ZAITOVA, A.Ya.; MASAGUTOV, R.M.; VOL'FSON, I.S.; KIRILLOV, T.S.; DOBREYKIN,
V.Ye.

Purifying the reflux of units for thermal cracking on an alumino-silicate catalyst. Trudy Bash NIINP no.5:56~68 '62.

(MIRA 17310)

VOL'FSON, I.V., inzh.; USHAKOVA, Ye.S., inzh.

Simplified telecommunication circuit in the operation of substations.
Elek.sta. 28 no.12:80-81 D '57. (MIRA 12:3)
(Telecommunication) (Electric substations)

VOL'FSON, I. V., DEKHAM, S. P.

Certain Peculiarities of Storage of Medical Supplies and Preparation
of Prescription Formulae Under Field Conditions.

VOYENNO-LETSINSKIY ZHURNAL (MILITARY RADICAL JOURNAL), No 3, 1955. p.79

RYTSЛИN, A.M., inzhener; BlAGONADEZHДIN, V.M., inzhener; KNYAZEVSKIY, B.A.,
inzhener; VOL'FSON, I.V., inzhener; MUSATOV, T.P., inzhener; IOFFE,
Ye.F., inzhener

Volume of instructions and operating papers for electric substations.
Elek.sta. 26 no.5:37-43 My '55. (MIRA 8:7)

1. Makeyevskiy setevoy rayon Donbassenergo (f. Rystlin).
2. Elektroseti Kuybyshevenergo (f. Blagonadzhdin). 3. VVS
Mosenergo (f. Knyazevskiy). 4. VVS Kirovenergo (f. Vol'fson).
5. Stalinskiy setevoy rayon Donbassenergo. 6. Gorenegro (f.
Ioffe). (Electric substations)

VOL'FSO_N, I.Ye.

"Mathematical theories of planetary motions." by O,Dziobek,
Reviewed by I.E. Vol'fson. Zhur. vych. mat. i mat. fiz.,
4 no.5:976 S-0 '64. (MIRA 17:12)

VATEL', I.A.; VOL'FSO~~N~~, I.YE.; YERESHKO, F.I.; LEBEDEV, V.N. (Moscow)

"Some problems of the theory of optimum transfers"

report presented at the 2nd All-Union Congress on Theoretical and Applied
Mechanics, Moscow, 29 January - 5 February 1964

LUKOV, B.N., prof. (Kuybyshev); PETROV, V.I., dotsent (Moskva); PAVLENKO, T.M., aspirant (Moskva); YERMOLAYEV, V.G., prof. (Leningrad); ADO, A.D., prof.; VOVSI, M.S., prof.; YERMOLAYEV, V.G., prof. (Leningrad); KUPRIYANOVA, N.A. (Kazan'); PETROV, G.I. (Moskva); DOLGOPOLOVA, A.V. (Moskva); SAKHAROV, P.P., prof.; BYKHOVSKIY, Z.Ye., prof.; MIN'KOVSKIY, prof. (Chelyabinsk); KHMEL'CHONOK, I.P. (Irkutsk); TEMKIN, Ya.S., prof. (Moskva); MIN'KOVSKIY, A.Kh., prof. (Chelyabinsk); MIL'SHTEYN, T.N., doktor med.nauk (Leningrad); TRUTMEV, V.K., zasluzhennyj deyatel' nauki, prof.; TSYRESHKIN, B.D., kand.med.nauk (Moskva); SOBOL', I.M., prof. (Stavropol'); TURIK, G.M. (Moskva); FRENKEL', M.M. (Moskva); MAZO, I.L.; POKRYVALOVA, K.P.; PROSKURYAKOV, S.A., prof.; ATKARSKAYA, A.A., prof.; GOL'DFARB, I.V., prof. (Izhevsk); PORUBINOVSKAYA, N.M. (Moskva); RUDNEV, G.P., prof.; MOLFSON, I.Z., prof. (Stalingrad); DOROSHENKO, I.T., prof. (Kalinin); ROZENFEL'D, M.O., prof. (Leningrad); SHUL'GA, A.O., prof. (Orenburg); MIKHLIN, Ye.G., prof.; TRET'YAKOVA, Z.V. (Moskva); MANUYLOV, Ye.N., prof. (Moskva); DOROSHENKO, I.T., prof. (Kalinin); YERMOLAYEVA, V.G., prof.

Speeches in the discussion. Trudy gos. nauch.-issl. inst. ukha, gorla i nosa no.11:79-87,129-146,179-186,233-248,311-333 '59.

(MIRA 15:6)

1. Chlen-korrespondent AMN SSSR (for Ado). 2. Direktor Moskovskogo gosudarstvennogo instituta ukha, gorla i nosa (for Trutnev).
(OTORHINOLARYNGOLOGY—CONGRESSES)

VOL'FSO N. G. MEL'NIKOV, N. N.

Effect of fillers on the stability of DDT dusts. [Trudy] NIUIF
no.156:64-73 '55. (MLRA 9:10)

(DDT (Insecticide))

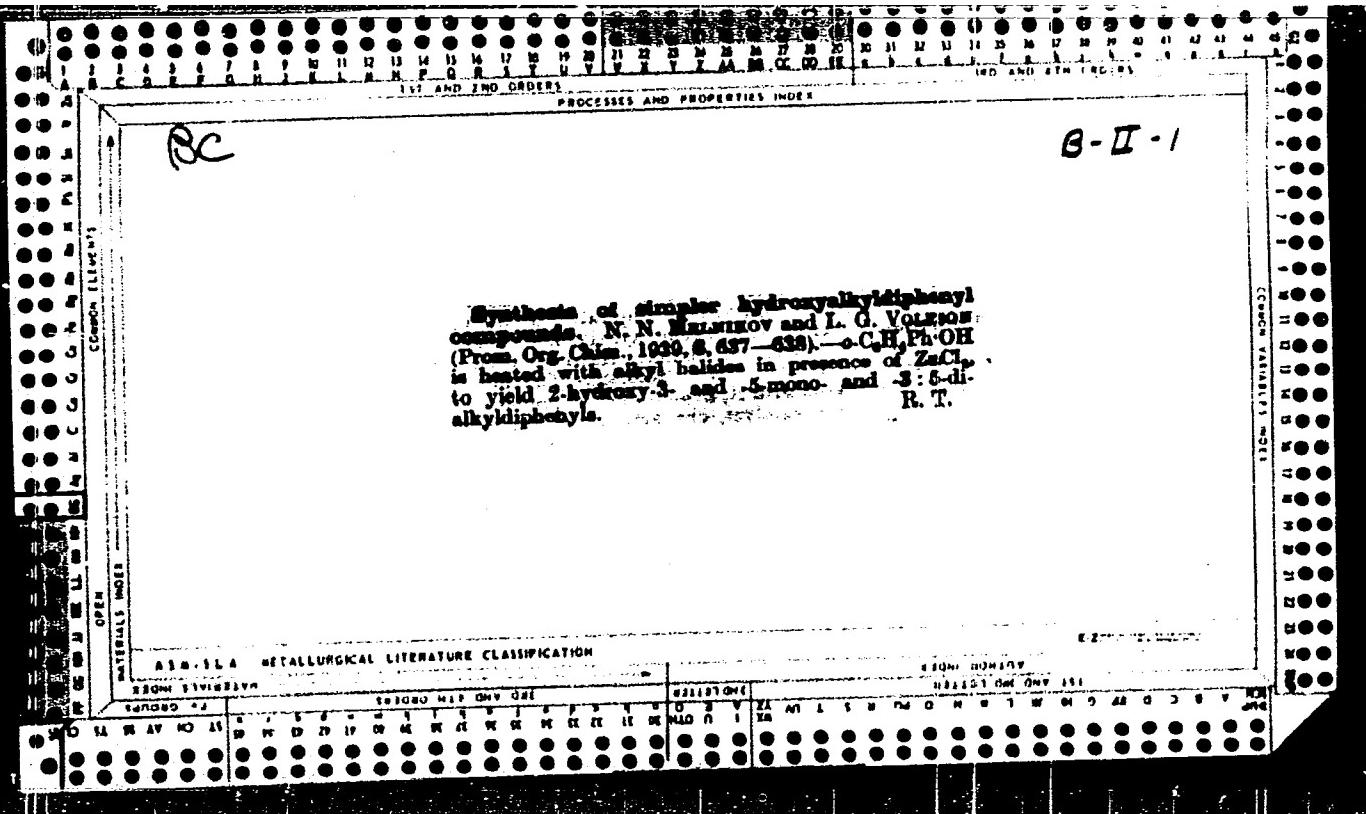
VOL'FSON, Il'ya Grigor'yevich; ZALGALLER, G.M., inzh., red.; POLIKARPOV, V.F.,
nauchnyy red.; CHERPAK, A.G., nauchnyy red.; PRUDNIKOVA, M.N., red.;
GUMOZOVA, N.A., red.; PANOVа, L.Ya., tekhn. red.

[Sanitary engineering equipment; a catalog] Sanitarno-tehnicheskoe
oborudovanie; katalog. Pod red. G.M. Zalgallers [Moskva] Gos. izd-vo
lit-ry po stroit. materialam, 1957. 201 p. (MIRA 11:7)

1. Russia(1923- U.S.S.R.) Ministerstvo promyshlennosti
stroitel'nykh materialov.
(Plumbing--Equipment and supplies)

Catalytic transformation of dimeric 1,3-cyclohexadiene.
 B. A. Kazanskii and L. G. Vol'fson, *J. Gen. Chem. (U. S. S. R.)*, **8**, 1685 (1938); cf. *C. A.*, **29**, 62241.
 Previously it was shown that 3-methylbicyclo[2.2.2]-octane, though belonging to those bicyclic systems in which there is no strain, is catalytically dehydrogenated over platinumized charcoal with cleavage of C_3H_6 and $\text{CH}_2 = \text{CHMe}$ and formation of CaH_6 and PhMe . It could be expected that *dicyclohexadiene* (**I**) and its *dihydro* derivative (**II**), derived of bicyclo[2.2.2]-octane (cf. Alder and Stein, *C. A.*, **26**, 5003), would also decompr. in a similar manner by catalytic dehydrogenation with separation of H_2 and C_6H_6 , and formation of C_6H_6 . **I** (cf. Hofmann and Damm, *C. A.*, **22**, 1240) failed to react on passing it in CO_2 over platinumized charcoal at 150° . At $240 - 5^\circ$ **I** in CO_2 and **II** formed *1,1-endoethylenetetrahydronaphthalene* (**III**), m. 63.5° . **II** reacts similarly to give **III**. **III** remains unchanged by passing it in CO_2 over the catalyst at $310 - 15^\circ$. At $340 - 50^\circ$ it gives a few crystals with a CaH_6 odor and uncertain m. p. In all the cases, the reaction gas contained about 93% H_2 and no unsatd. compds.

Chas. Blanc



Organic insecticides. X. Synthesis of dialkyl disulfides. N. N. Mel'nikov and I. G. Vulfson. *Zhur. Obschekh. Khim.* (J. Gen. Chem.) 20, 2085 (1950); *cf.* *C.A.* 39, 2914. Several R₂S₂ compds. were prep'd. as follows: 0.15 mol. cryst. Na₂S in 45 ml. H₂O was heated with 0.15 mol. S, the soln. dild. with 160 ml. EtOH, refluxed with 0.3 mol. RBr several hrs., dild. with H₂O, and the disulfides isolated by evtn. and distn. The higher members, particularly those with secondary or tertiary attachment S, are poorly stable on distn. Olefin formation is responsible for the poor yields. The products obtained were: (*i*-Bu-CH₂CH₂S)₂, 50.1%; b.p. 130°-131°, d₄²⁰ 0.9033, n_D²⁰ 1.4865; (*iso*-Bu-CH₂CH₂S)₂, 40.7%; b.p. 130°-42°*, 0.9027, 1.4873; (*iso*-Pr-CH₂CH₂S)₂, 12%; b.p. 125°, 0.9172, 1.4853; (C₆H₅CH₂CH₂S)₂, 37%; b.p. 160°-71°, 0.9010, 1.4871; (*iso*-Pr-CH₂CH₂S)₂, 15%; b.p. 137°-8°, 0.9147, 1.4880; (C₆H₅CH₂CH₂S)₂, 20%; b.p. 137°-8°, 0.9001, 1.4857; (C₆H₅CH₂S)₂, 36%; b.p. 185°-93°, 0.8772, 1.4775; (C₆H₅CH₂CH₂S)₂, 32%; b.p. 155°, 0.8933, 1.4819; (*Bu*₂CH₂S)₂, 40%; b.p. 175°-85°, 0.8830, 1.4841; (*iso*-Am-CH₂CH₂S)₂, 27%; b.p. 105°-7°, 0.8925, 1.4810; (*iso*-Bu-CH₂CH₂S)₂, 18%; b.p. 143°-51°, 0.9040, 1.4820; (*iso*-Am(*iso*-Pr)CH₂)₂, 20%; b.p. 148°-50°, 0.9128, 1.4923; (*iso*-Bu₂CH₂S)₂, 44%; b.p. 150°, 0.8970, 1.4795; (C₆H₅SH)₂, 77%; 0.8907, 1.4813; (C₆H₅CP₂H₅S)₂, 69%; 0.8946, 1.4815; (*Bu*₂MeCS)₂, 10%, 0.9135, 1.4870; [*iso*-Bu(*iso*-Am)CH₂)₂, 10%; b.p. 145°-50°, 0.8908, 1.4705; (*iso*-Am₂CH₂)₂, 70%; 0.8873, 1.4821; [C₆H₅CH₂(*iso*-Bu₂S)₂, 42%; b.p. 175°-80°, 0.8905, 1.4810; (C₆H₅CH₂CH₂S)₂, 61%; b.p. 100°-2°*, 0.8940, 1.4811. **XI. Synthesis**

of alkanesulfonates with isostructure and surface tension of their aqueous solutions. I. G. Vulfson and N. N. Mel'nikov. *Ibid.* 2080-92. A no. of new alkanesulfonates were prep'd. either by chlorination of the corresponding alkyl sulfides in H₂O, followed by hydrolysis of the sulfonyl chlorides, or by oxidation of the disulfides with HNO₃. Only the latter method gave satisfactory results. The acids were neutralized with KOH or Ba(OH)₂, and the evapd. solns. extd. with Et₂O, then with EtOH, crystd. from EtOH, and dried over P₂O₅. The Ba salts were metathetically converted to K or Na salts with the carbonates. No further details on preps. are given. Dets. of the surface tension of aq. solns. showed the lowest tension for compds. with normal structure, while compds. with the sulfone group near the middle of the chain were least active. The following values (dynes sq cm⁻¹) were found at 1, 0.5, 0.25, and 0.1% concns., resp.: *Et*₂CH(SO₃K)Bu, 63.1, 68.8, 67.9, 68.0; *iso*-Bu-CH(SO₃K)Bu, 54.9, 56.5, 63.1, 69.3; *Me*CH(SO₃K)C₆H₅, 61.4, 62.7, 65.7, 67.6, 67.6, 69.3; *Pt*CH(SO₃K)Bu, 51.0, 50.9, 50.9, 50.0; C₆H₅SO₃K, 38.8, 38.0, 38.0, 38.0; *Et*CH(SO₃K)C₆H₅, 40.0, 45.1, 50.2, 55.6, 62.0, 68.0, 67.1; *Et*CH(SO₃K)C₆H₅, 42.8, 51.0, 62.6, *Bu*₂CH(SO₃K)K, 48.1, 55.3, 63.1, 68.3; *iso*-AmCH(SO₃K)Me, 50.2, 58.2, 64.3, 67.7; *iso*-AmCH(SO₃K)Na*Pr*, 48.3, 55.5, 64.9, 66.4; *iso*-Bu-CH₂SO₃K*Bu*, 47.2, 50.6, 58.7, 67.0; *Me*₂CHCH₂(SO₃K)CH₂CH₂CH₂Me, 46.6, 52.8, 56.8, 64.2; [*iso*-Bu₂CH₂(SO₃K)CH₂CH₂CH₂Me], 46.6, 52.6, 63.8, 64.6, 62.3; *iso*-Bu-CH(SO₃K)CH₂CH₂CH₂Me, 46.6, 52.6, 63.8, 64.6, 62.3; *iso*-Bu-CH(SO₃K)C₆H₅, 34.2, 41.5, 45.8, 51.7; *Bu*₂CH(SO₃K)C₆H₅, 34.9, 39.4, 45.4, 50.0. — G. M. Kiselevoff

BF

*All - 1
Aliphatics*

Organic insecticides. XI. Synthesis of alkyl alkanesulphonates with an iso-structure, and surface tension of their aqueous solutions. I. G. Vol'ken and N. N. Melnikov (*J. gen. Chem. USSR*, 1963, **33**, 2089-2092 [U.S. transl., 2163-2165]).—A series of Na or K alkanesulphonates is prepared from corresponding dialkyl disulphides, either by chlorination in aq. media and hydrolysis of the alkyl sulphochlorides or by HNO_3 oxidation. The oxidation (preferred method) is effected by dropwise addition of the calc. wt. of HNO_3 (d 1.4) to the disulphide, heating for 1 hr. at 100°, neutralization [KOH or $\text{Ba}(\text{OH})_2$], evaporation, washing with Et_2O , and extraction into, and recrystallised from, EtOH . The

surface tension, γ (dynes/cm.) in 1%, 0.5%, 0.25%, and 0.1% solution is as follows for the following sulphonates: *K n-heptane-3-* (63.1, 66.8, 67.9, 68.9), *K 2-methyl-n-alkane-4-* (54.9, 59.5, 67.6, 69.3), *K n-octane-2-* (57.7, 62.7, 65.7, 67.6), *K n-phenyl-4-* (53.6, 59.9, 66.9, 68.0), *K n-phenyl-1-* (38.8, 52.0, 58.6, 67.1), *K n-nonene-3-* (40.0, 45.1, 50.2, 65.6), *Na n-nonene-3-* (37.6, 42.8, 53.9, 62.6), *K n-nonene-5-* (48.1, 55.3, 63.1, 66.3), *K 2-methyl-n-octane-5-* (50.2, 58.2, 64.3, 67.7), *Na 2-methyl-n-octane-5-* (48.3, 55.3, 54.9, 66.4), *K 2-methyl-n-octane-4-* (47.2, 53.3, 61.7, 67.9), *K 2 : 6-dimethyl-n-heptane-3-* (46.6, 52.8, 56.8, 64.7); *K 2 : 6-dimethyl-n-heptane-4-* (49.3, 53.3, 60.3, 64.8), *K n-decano-1-* (38.5, 48.7, 57.2, 62.3), *K 2 : 7-dimethyl-n-octane-4-* (46.6, 52.6, 63.6, 64.6), *K 2-methyl-n-decan-4-* (34.2, 41.1, 45.8, 53.7), and *K n-dodecane-5-sulphonate* (34.9, 39.4, 45.4, 56.9). In this series, γ decreases with increasing mol. wt.; at higher concn. (1.0%), γ is lowest for the n-alkane compounds with terminal SO_3K groups, and at lower concn. (0.1%), γ is lowest for n-alkane compounds with SO_3K groups near the middle of the chain. J. D. Bu'Lock.

Sci.-Res. Inst. Fertilizers + Insecticides (NIUIF)

Organic Chemistry

Organic insecticides. X. Synthesis of dialkyl disulfides. N. N. Mel'nikov and L. G. Vol'fson. *J. Gen. Chem. U.S.S.R.* 20, 2159-61 (1960) (Engl. translation).—See C.A. 45, 5604d. XI. Synthesis of alkane sulfonates with iso structure and surface tension of their aqueous solutions. L. G. Vol'fson and N. N. Mel'nikov. *Ibid.* 2163-5 (Engl. translation).—See C.A. 45, 5604e. B. L. M.

VOLFSOM, L. G.

9

M. A. YUET

120 cpi es

OKAY

Reaction of hexachlorocyclooctadiene with some unsaturated compounds

L. G. Volfsom, N. N. Marinov,
A. F. Plate, M. N. Sosulinova, and V. S. Teltsev (N. D.
Zelinskii Inst. Org. Chem., Moscow). Doklady (N. D.)
Nauk, S.S.R. 105, 1252 (1955).—Heating 47 g. hexa-
chlorocyclooctadiene (I) with 11.7 g. cyclopentene 5 hrs.
at 120–4° gave 20.3 g. 1,3,6,7,8,9-hexachloro-1,1-dichlorotetra-
cylene-1,7,8,9-tetrahydrododecene, m. 162–3°. I and
2-methylcyclopentene thus gave 4,5,6,7,8,9-hexachloro-3,7-
endomethylene-1-methyl-1,2,6,7,8,9-hexahydrododecene, m. 61–
3°. I and 2-methylfuran in 7 hrs. at 70° gave 1,2,3,8,10,7a-
hexachloro-4,7-endoxo-7-methyl-3a,4,7,7a-tetrahydronaphthalene,
m. 175–0°. I and cyclohexene in 30 hrs. at 115° gave
1,3,3,4,9,9-hexachloro-1,4-endomethyleno-1,4,10,5,6,7,8-octahydronaphthalene, m. 77°. I and bicyclo[2.2.1]hept-
2,5-diene gave in 25 hrs. at 100° 1,2,3,4,10,10-hexachloro-
1,4,5,8-dicundomethylene-1,4,10,5,8,8a-hexahydronaphthalene
(Aldrich), m. 93–5°. I and bicyclo[2.2.1]hept-2-ene in 1.5
hrs. at 150° gave a good yield of 1,2,3,4,10,10-hexachloro-
1,4,5,8-dicundomethylene-1,4,10,5,6,7,8,8a-octahydronaphthalene,
m. 76.5–7°. I and 5-methylbicyclo[2.2.1]hept-2-ene
in 11 hrs. at 150° gave a good yield of 1,2,3,4,10,10-hexa-
chloro-1,4,5,8-dicundomethylene-6-methyl-1,4,5,6,7,8,8a-octahydronaphthalene, m. 56–8°. I and 5-ethylbicyclo[
2.2.1]hept-2-ene in 13 hrs. at 150° gave 1,2,3,4,10,10-hexa-
chloro-1,4,5,8-dicundomethylene-6-ethyl-1,4,5,6,7,8,8a-octahydronaphthalene, m. 56–8°, the 6-*Am*-analog, prepared
similarly, b.p. 188° n_D²⁰ 1.540, d₄²⁰ 1.3004. I and acetone/
bicyclo[2.2.1]hept-2-ene in 23 hrs. at 95° gave 1,2,3,4,10,10-
hexachloro-1,4,5,8-dicundomethylene-6-acetoxy-1,4,5,6,7,8,8a-octahydronaphthalene, m. 172–3°. I and styrene in 3
hrs. at 170° gave 1,2,3,4,7,7-hexachloro-5-phenylbicyclo[
2.2.1]hept-2-ene, m. 73–4°.

G. M. Kosolapoff

VOL'FSON, L.G.; VOLODKOVICH, S.D.; MEL'NIKOV, N.M.; RUBLEVA, I.M.

Organic insectofungicides. Part '24. New method for the preparation
of halo phenyl esters of sulfonic acids. Zhur.ob.khim. 26 no.9:
2579-2581 S '56. (MLRA 9:11)

(Sulfonic acids)

SOV/79-29-2-36/71

AUTHORS:

Vol'fsen, L. G., Mel'nikov, N. N., Person, A. I.

TITLE:

On the Field of Organic Insectofungicides (Iz oblasti organicheskikh insektofungitsidov). XXXIX. The Meltability Diagram of the Binary System of o- and n-Chloro-phenyl-n-chloro-benzene Sulfonates and the Cryoscopic Method of the Determination of n-Chloro-phenyl-n-chloro-benzene Sulfonate (XXXIX. Diagramma plavkosti binarnoy sistemy o- i n-khlorfenil-n-khlorbenzolsulfonatov i krioskopicheskiy metod opredeleniya n-khlorfenil-n-khlorbenzolsulfonata)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 526-529 (USSR)

ABSTRACT:

One of the most active insectofungicides killing ticks, especially for plants, is n-chloro-phenyl-n-chloro-benzene sulfonate (I), which is known by the terms ether sulfonate, "ovotran", etc. The commercial preparation usually contains the compound (II), (III) and smaller amounts of phenyl-n-chloro-benzene sulfonate, all of which develop a considerably less intense activity and must be used therefore in high concentrations harmful to plants. Due to the mixture composed of isomeric and related compounds, the determination of the actually active factor in it is very difficult. Up till now, it has

Card 1/3

SOV/79-29-2-36/7:

On the Field of Organic Insectofungicides. XXXIX. The Melting Diagram of the Binary System of o- and n-Chloro-phenyl-n-chloro-benzene Sulfonates and the Cryoscopic Method of the Determination of n-Chloro-phenyl-n-chloro-benzene Sulfonate

not been possible to determine (I) in this technical mixture (Ref 3). In order to attain this aim, the authors tried to start from the physicochemical properties and the cryoscopic constant of compound (I) according to references 4-6, in which pure γ -hexachloro cyclohexane is used as solvent on the analysis of "lindane". For the application of the cryoscopic analysis of (I) the authors investigated primarily the melting diagram of the binary system n-chloro-phenyl-n-chloro-benzene sulfonate - o-chloro-phenyl-n-chloro-benzene sulfonate and determined the cryoscopic constant of (I), which is equal to 13.40 (according to ten determinations; see table 1 and the figure with the diagram). It was shown that the cryoscopic method can be applied to the analysis of the isomeric mixture and related compounds which are present in the technical preparation (I). Table 2 shows data on the analysis of the ternary system: n-chloro-phenyl-n-chloro-benzene sulfonate, o-chloro-phenyl-n-chloro-benzene sulfonate and 2,4-dichloro-phenyl-n-chloro-benzene sulfonate. For details see the experimental part. There are

Card 2/3

SOV/79-29-2-36/71

On the Field of Organic Insectofungicides. XXXIX. The Melting Point Diagram of the Binary System of o- and n-Chloro-phenyl-n-chloro-benzene Sulfonates and the Cryoscopic Method of the Determination of n-Chloro-phenyl-n-chloro-benzene Sulfonate

1 figure, 2 tables, and 9 references, 3 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udotreniyam i insektifungitsidam
(Scientific Institute of Fertilizers and Insectofungicides)

SUBMITTED: December 28, 1957

Card 3/3

5(3)

SOV/79-29-9-6/76

AUTHORS: Volodkovich, S. D., Vol'fson, L. G., Kuznetsova, K. V.,
Mel'nikov, N. N.

TITLE: From the Field of Organic Insectofungicides. XLIII. Synthesis
of α -Oxides by Oxidation of Polycyclic Halogen Derivatives
With Hydrogen Peroxide

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, № 9,
pp 2837 - 2839 (USSR)

ABSTRACT: Since some of the cyclic α -oxides are strong agents against
insects and mold fungi, the authors oxidized some halogen
derivatives of polycyclic hydrocarbons. To obtain Dieldrin
and Endrin it was first of all necessary to investigate the
oxidation of Aldrin and Isodrin. The two former compounds
were hitherto obtained solely by the oxidation of Aldrin
and Isodrin with organic hydroperoxides (Refs 3-6) or H_2O_2 in
the presence of pervanadic or pertungstic acid (Ref 7). To
obtain the corresponding oxides, the authors oxidized the
halogen derivatives of polycyclic hydrocarbons with 27-30%
hydrogen peroxide solution in 80-99% acetic acid solution;
almost all these halogen derivatives were transformed into

Card 1/2

From the Field of Organic Insectofungicides. XLIII. SOV/79-29-9-6/76
Synthesis of α -Oxides by Oxidation of Polycyclic Halogen Derivatives With
Hydrogen Peroxide

α -oxides in good yields. The following compounds recently synthesized by the authors were oxidized: 1,2,3,4-tetra-chloro-10,10-difluoro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene; 1,2-dichloro-3,4,10,10-tetrafluoro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene; 1,2,3,4-tetrachloro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene; 1,2,3,4,10-pentachloro-1,4,5,8-di-endomethylene-1,4,4a,5,8,8a-hexahydronaphthalene (Refs 8,9).

α -Oxides were obtained from all of these compounds. Aside from Dildrin and Endrin, none of the compounds synthesized by the authors are described in publications. It is interesting to note that the yield of α -oxide mainly depends on its water resistance (Table). The insecticide activity of the oxides runs in parallel with the activity of the initial products (of the unsaturated compounds). There are 1 table, 9 references, 6 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam (Scientific Institute of Fertilizers and Insectofungicide Agents)

SUBMITTED: July 17, 1958
Card 2/2

5.3000

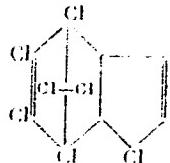
7(53)
SOV-60-32-4-41-41

AUTHORS: Volodkovich, S. D., Vol'fson, L. G., Kopyan, I. M.
Melnikov, N. N., Stavshikov, V. V.

TITLE: Concerning the Preparation of Insecticide "Heptachlor"

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, No 1, pp 227-
233 (USSR)

ABSTRACT: "Heptachlor" or 3,4,6,7,8-heptafluoro-4,7-endomethyl-3-
ene-3a,4,7,7a-tetrahydroindane has the following properties:
white crystals with camphor odor, dissolves well in
organic solvents.



Card 1/3

Hexachlorocyclopentadiene was condensed with cyclo-
pentadiene and 4,5,6,7,8-hexachloro-3a,4,7,7a-

Concerning the Preparation of Insecticide
"Heptachlor"

77¹-32
SOV/80-35-1-41, 45

Tetrahydro-4,7-endomethylene-chlordan (chlordan) was formed. The latter was chlorinated and heptachlor was obtained (yields are not given). Heptachlor content in the reaction mixture is increased to 70% by chlorination for 30 to 120 minutes. The optimal conditions for the formation of chlordan in CCl_4 are 10% excess of C_2H_6 , at 80-85°, duration 30-40 minutes. For the chlorination of chlordan, the following conditions are recommended: the presence of activated (at 120°, for 1-2 hours) kieselguhr and a temperature not over 50°. Heptachlor content is about 70%. The yield of heptachlor is determined by the total amount of introduced chlorine and, with certain limits, is independent of the feed rate of chlorine and duration of chlorination. There are 6 figures; and 29 references, 4 Soviet, 16 U.S., 3 German, 4 U.K., 2 French. The 5 most recent U.S. references are: H. Bluestone, Y. A. Tajima, R. E. Lidov, Am. Pat. 2818445; M. Kleinman, *Ibid.*,

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Concerning the Preparation of Insecticide
"Heptachlor"

77532
Sov/80-33-1-41/49

2741640; ibid., 2741639; ibid., 2741641; H. Bluestone, R.
E. Lidov, J. H. Knaus, P. W. Hoverton, ibid., 2576666.

ASSOCIATION: Research Institute of Fertilizers and Pesticides
(Nauchnyy institut po udobreniyam i insektorfungitsidam)

SUBMITTED: June 3, 1959

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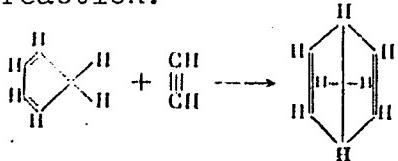
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SOV/80-33-2-34/52

AUTHORS: Belikova, N. A., Vol'fson, L. G., Kuznetsova, K. B., Mel'nikov, N. N., Person, A. I., Plate, A. F., Pryanishnikova, M. A.

TITLE: Concerning the Isolation of Aldrin and Dieldrin

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 2,
pp 454-463 (USSR)

ABSTRACT: The article describes the synthesis of aldrin and dieldrin based on information gathered from foreign patent literature and on the authors' studies of the basic reaction of hexachlorocyclopentadiene with bicyclo-(2,2,1)-heptadiene-2,5. The latter was synthesized in a continuous flow installation, according to the reaction:

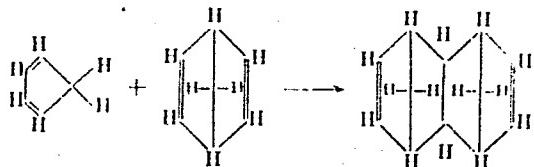


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Concerning the Isolation of
Aldrin and Dieldrin

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The optimum conditions for the above condensation of cyclopentadiene with acetylene were: molar ratio 1:1.1 to 1:2; temperature 345° C; pressure 20 atm. The yield of bicycloheptadiene under those conditions was about 48% and dropped sharply with rising temperature. The spent gas contained 95-97% acetylene and could be recycled. Investigation of the thermal stability showed that bicyclo-(2,2,1)-heptadiene-2,5 remained unchanged at 290° C, but under the conditions of the reaction it reacted with one cyclopentadiene molecule:



At 340° C and above, bicycloheptadiene was isomerized into cycloheptatriene; at 390° and 8 atm the extent of isomerization reached 20%, and a small amount of

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